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d) receiving data from the network based on at least one result of the monitoring step.--.

REMARKS

I. GENERAL

Applicants thank the Examiner for extending a telephone interview to Applicants' attorney on December 19, 2001 (the "Interview").

Claims 38, 42, 43, 52, 53, 58, 62, 63, 72, 73, 78, 80, 82 and 83 have been amended merely to clarify the subject matter of provided therein. Attached hereto, please find a marked-up version of the claim changes made by the current amendment. The attached pages with these claim changes marked appropriately is captioned as "**VERSION WITH MARKINGS TO SHOW CLAIM CHANGES MADE**". New claim 86 has been added to the above-identified application. Accordingly, claims 38, 39, 41-59 and 61-86 are now under consideration in the present application. Applicants respectfully submit that no new matter has been added.

**II. THE REJECTIONS UNDER 35 U.S.C.
§§ 102(e) AND 103(a) SHOULD BE WITHDRAWN**

Claims 38, 39, 41-43, 45-47, 50-59, 61-63, 65-67 and 70-83 stand finally rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,893,091 issued to Hunt et al. (the "Hunt Patent"). Claims 44 and 64 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Hunt Patent. The Examiner also

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rejected claims 48, 49, 68 and 69 under 35 U.S.C. § 103(a) as being unpatentable over the Hunt Patent, in view of A. Prasad Sistla et al., "Temporal Conditions and Integrity Constraints in Active Database Systems" (the "Sistla Publication"). It is respectfully asserted that amended independent claims 38, 42, 43, 52, 53, 58, 62, 72, 73, 78, 80, 82 and 83 and the claims which depend from these independent claims are in no way taught or suggested by the Hunt Patent, taken alone or in combination with the Sistla Publication for at least the reasons as set forth below.

In order to render a claim anticipated under 35 U.S.C. § 102, a single prior art reference must disclose each and every element of the claim in exactly the same way. See Lindeman Maschinenfabrik v. Am Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103, not only must the prior art teach or suggest each element of the claim, the prior art must also suggest combining the elements in the manner contemplated by the claim. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir.), cert. denied 111 S.Ct. 296 (1990); see In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990).

Applicants' invention, as recited in independent claim 38, relates to an apparatus for monitoring information on a network. The apparatus comprises, *inter alia*:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting

a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation . . .

Independent claims 42, 52, 53, 80 and 83 relate to apparatuses which recite similar subject matter, and independent claims 58, 62, 72, 73, 78 and 82 relate to method also including similar recitations.

The Hunt Patent relates to a system and method for managing and distributing information in the form of alerts that are divided into a keyword-part and an argument-part over a data network. (See Hunt Patent, column 4, lines 38-44). The system and method are based on a **server-push model**, and deliver user notifications of new information posted by participating content providers (i.e., Timely Information Providers) via IP Multicast. (See Id., column 4, lines 44-47). In particular, the Timely Information Server 4 sends the alert over the computer network using the IP Multicast. The alert is received by subscriber clients 8a, 8b, 8c which compare the keywords in the alert to their local keyword profiles 10a, 10b, 10c using a predetermined logical (Boolean) expression, and display the alerts which satisfy the expression. (See Id., column 7, line 63 to column 8, line 3).

As described in the Hunt Patent, the Timely Information Providers 2d send information to the Timely Information Server 4, or the Timely Information Server 4 can go out and collect the information from the Timely Information Providers 2d. (See Id., column 8, lines 8-12). The Timely Information Server 4 analyses the incoming

information, and compares it with its Keyword Dictionary 6 to create an alert, which is sent over the network. (See Id., column 8, lines 12-15). The alert is received by the client computer 8d which compares the keywords in the alert to their local keyword profile 10d using the logical expression. If the criteria of expression is satisfied, the client computer 8d notifies the user of the presence of the alert 12. (See Id., column 8, lines 15-20). At the same time the client 8d receives the information from the Timely Information Providers 2d, a tracking information packet is sent 15 to the Timely Information Server 4 specifying that the user/client has acted upon the received alert. (See Id., column 8, lines 28-31). According to the Hunt Patent, a Branded Information Server 20 (which post new content on their Internet Servers) sends the alert over the network via the IP Multicast to the client 8a who has subscribed (registered) to receive alerts from a Branded Information Server 18. (See Id., column 8, line 52-55).

Alert notification of the Hunt Patent starts with the user initially defining a profile of interest (i.e., a set of keywords and a search expression) through a definition webpage upon the registration with the Timely Information Server 68 for the first time, and a keyword profile file is created **on the user's machine**. (See Id., column 11, lines 36-41). The profile can be updated by accessing the Timely Information Server's profile definition webpage. When alert's keywords match the filtering criteria defined in the user's keyword profile, the client application alerts the user. (See Id., column 11, lines 41-46).

A. CLAIMS 38, 39, 41, 42, 45, 46, 52, 53, 58, 59, 61, 62, 65, 66 AND 72-83

Applicants respectfully assert that the Hunt Patent, taken alone or in combination with the Sistla Publication, does not teach or suggest, much less disclose an apparatus or method for monitoring information on a network in which, *inter alia*, **a monitoring module is executed to transmit at least one instruction to the network, with this instruction being executed on the network** as explicitly recited in independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82 and 83 of the above-identified application. In the Final Office Action dated October 23, 2001, the Examiner maintains that the Hunt Patent teaches the transmission of the instruction to the network by equating it to “client registrations [by the client 8a] to receive alerts ... [in] col. 8, lines 52-55 [of the Hunt Patent].” (See Office Action dated May 2, 2001, page 3, line 1).

As discussed during the Interview, Applicants respectfully assert that the Hunt Patent in no way teaches or suggests, much less discloses that **at least one instruction is transmitted to the network and executed on such network**. In particular, the disclosure of the Hunt Patent explicitly states that the alert notification of the Hunt Patent starts with a user initially defining a profile of interest, and a *keyword profile file is created on the user's machine*. (See Hunt Patent, column 11, lines 36-41). In addition, the Hunt Patent provides that the clients 8a, 8b, 8c receive the alerts, and compare the keywords in the alerts to *their local keyword profiles 10a, 10b, 10c* using a predetermined logical (Boolean) expression and display the alerts which satisfy the expression. (See Hunt Patent, column 7, line 63 to column 8, line 3). Thus, the clients

8a, 8b, 8c of the Hunt Patent only receive the alerts, and perform the comparison of these alerts *locally* (which was apparently equated by the Examiner to the monitoring operation).

However, these clients 8a, 8b, 8c do not run any monitoring module which is executed to transmit the instruction to be executed on the network. Indeed, the Hunt Patent explicitly describes that the alerts are generated when the alert's key words meet the filtering criteria *defined in the user's keyword profile*, which is created on the user's machine. (See Id., column 11, lines 44-46). Even if, *arguendo*, the Examiner equates the filtering operation in the Hunt Patent to the execution of at least one instruction of Applicants' claimed invention, the Hunt Patent in now way teaches or suggests, much less discloses that such instruction is executed on the network, as also recited in amended independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82 and 83 of the above-referenced application.

In addition, at least because the Hunt Patent does not teach or suggest the above-mentioned *monitoring operation* recited in Applicants' independent claims, the Hunt Patent also does not teach or suggest that the **data is received from the network based on at least one result of the monitoring operation**, as also recited in these amended independent claims. The Sistla Publication does not cure at least the above-described deficiencies of the Hunt Patent to teach or suggest Applicants' invention as recited in amended independent claims 38, 42, 52, 53 58, 62, 72, 73, 78, 80, 82 and 83, nor does the Examiner contend that it does.

Further, with respect to claims 42 and 62, these independent claims recite that the information includes at least one dynamic event, and that the monitoring operation is performed by monitoring for the dynamic event on the network. In the Office Action dated May 2, 2001, the Examiner apparently equates the keyword profile of the Hunt Patent (which is defined in terms of a Boolean expression) to the dynamic event of Applicants' claimed invention recited in independent claims 42 and 62. The Examiner also believes that the Hunt Patent teaches that the monitoring operation is performed by monitoring the event on the network. (See Office Action dated May 2, 2001, page 4, lines 7-10). Also, the Examiner states that in the Hunt Patent, the change of the keyword profile is disclosed explicitly and implicitly, and then points to column 11, lines 41-43 to support this allegation. (See Final Office Action dated October 23, 2001, page 12, paragraph 39a).

Applicants respectfully disagree, and submit that the keyword of the Hunt Patent **cannot be equated to the dynamic event** as recited in independent claims 42 and 62 of the above-referenced application. The reason for this is that in the Hunt Patent, the keyword is a static (i.e., non-changeable) part of the condition, while the event of Applicant's claimed invention is a dynamic (i.e., changeable) part of the condition.

With respect to claims 39, 41, 45, 46, 59, 61, 65, 66, 74-77, 79 and 81, these claims depend from at least one of the amended independent claims described above. Thus, the arguments discussed above with respect to amended independent

claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82 and 83 also apply to claims 39, 41, 45, 46, 59, 61, 65, 66, 74-77, 79 and 81.

B. CLAIMS 43, 44, 47, 63, 64 AND 67

Claims 43, 44 and 47, and claims 63, 64 and 67 depend from amended independent claims 38 and 58, respectively. Accordingly, the arguments presented above for independent claims 38 and 58 apply equally to claims 43, 44, 47, 63, 64 and 67.

With respect to claims 43 and 63, these claims recite that a **THEN portion (of a rule-based criteria) includes a probing action which has at least one probing operator**. It was previously asserted by Applicants that the "THEN" portion of the notification criteria of the Hunt Patent is a Boolean expression (i.e., either 0 or 1). In clear contrast to the teachings of the Hunt Patent, independent claims 43 and 63 explicitly recite that the THEN portion includes a probing action. In the Final Office Action dated October 23, 2001, the Examiner further alleges that the Hunt Patent teaches the probing action by applying a Boolean expression to determine an alert that fits the notification criteria. (See Final Office Action, page 12, paragraph 40a). Thus, the Examiner is again equating the Applicants' claimed probing action with the Hunt Patent's Boolean expression.

However, Applicants respectfully assert that this recited probing action cannot be equated to a mere Boolean expression of the Hunt Patent. This is because

this conventional Boolean expression performs a check and then based on this check executes another operation. However, Applicants' claimed "probing" operation can be equated to "an exploratory investigation". (See Webster's Ninth New Collegiate Dictionary, 1999, p. 937, a copy of which is attached herewith). Thus, at least for this additional reason and the reasons presented above, the Hunt Patent in no way teaches or suggests, much less discloses the subject matter recited in claims 43 and 63.

With respect to amended claims 44 and 64, these claims depend from claims 43 and 63, respectively. Accordingly, the arguments provided above for claims 43 and 63 are applicable to claims 44 and 64. In addition, amended claims 44 and 64 recite that **the probing operator includes a data mining query**. Applicants respectfully asserts that there is absolutely no disclosure in the Hunt Patent which teaches that the probing operator includes a data mining query. In the Final Office Action, the Examiner admits that the Hunt Patent does not specifically teach that the probing operator includes a data mining query. Then, however, the Examiner alleges that the Hunt Patent teaches that its probing operator includes a sequence for instructions for gathering information. Thereafter, the Examiner takes "official notice" that data mining is known in the art, and that it would be obvious to incorporate the conventional data mining in the Hunt Patent's monitoring system for improving system effectiveness. (See Final Office Action dated October 23, 2001, pages 9-10, paragraph 29). Also, the Examiner believes that equates the ruled-based criteria of Applicant's

claimed invention to a notification criteria of the Hunt Patent. (See Office Action dated May 2, 2001, page 4, lines 15-16).

Applicants respectfully assert that the Hunt patent provides absolutely no *teaching, suggestion, motivation or incentive* to utilize data mining techniques in its monitoring system. Indeed, there is no need to use any data mining techniques for the filtering procedure provided in the Hunt Patent. In fact, using data mining procedures may slow the processing of the filtering procedure of the Hunt Patent. Thus, the disclosure of the Hunt Patent would not teach or suggest to one having ordinary skill in the art to combine it with prior art data mining. In fact, the disclosure of the Hunt Patent would teach away from utilizing the data mining techniques, because such combination would likely slow down the processing time of the Hunt Patent's system.

Thus, at least for this additional reason and the reasons presented above, the Hunt Patent in no way teaches or suggests, much less discloses the subject matter recited in amended claims 44 and 64.

With respect to claims 47 and 67, these claims depend from claims 43 and 63, respectively. Accordingly, the arguments provided above for claims 43 and 63 are applicable to claims 47 and 67. In addition, claims 47 and 67 recite that **an atomic condition (of a complex condition of the IF portion) includes at least one literal portion**. In the Office Action, the Examiner equates the literal portion of Applicants' claimed invention to Boolean operators of the Hunt Patent. (See Office Action dated May 2, 2001, page 5, lines 7-8). In the Final Office Action dated October 23, 2001, the

Examiner believes that the Hunt Patent's ability to negate using the NOT operator can be equated to the Applicants' claimed literal portion.

However, Applicants respectfully assert that the literal portion recited in these claims is a term of the art of logic programming and databases (e.g., a relation in a relational database), and not a mere Boolean expression. One example of a literal portion is such that it can be used to search for stores which sell jeans but not jackets. However, the Hunt Patent system is not capable of using such literal portion, nor was the literal portion disclosed therein, either explicitly or implicitly. Thus, at least for this additional reason and the reasons presented above, the Hunt Patent in no way teaches or suggests, much less discloses the subject matter recited in claims 47 and 67.

Again, the Sistla Publication does not cure the above-described deficiencies of the Hunt Patent, nor does the Examiner contends that it does.

C. SUMMARY

Accordingly, the Hunt Patent, taken alone or in combination with Sistla Publication, does not teach or suggest, much less disclose the subject matter recited in independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82 and 83 and the claims which depend therefrom. Therefore, an affirmation of patentability is respectfully requested for pending claims 38, 39, 41-59 and 61-83.

III. NEW CLAIM 86

New independent claim 86 is presented to cover further aspects of Applicants' invention. Support for new claim 86 can be found throughout the specification and in the drawings. This new independent claim 86 includes the recitations of presently-pending independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82 described above. Accordingly, for at least the reasons presented above with reference to independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82, Applicants respectfully submit that claim 86 is allowable over the Hunt Patent, taken alone or in combination with Sistla Publication.

IV. CONCLUSION

In light of the foregoing, Applicants respectfully submit that pending claims 38, 39, 41-59 and 61-86 are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CLAIM CHANGES MADE

38. (Twice Amended) An apparatus for monitoring information on a network, comprising:

 a storage device storing a predefined criterion, and having a monitoring module thereon; and

 a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation,

 wherein the information includes at least one event which is used for detecting a change on the network.

42. (Twice Amended) An apparatus for monitoring information on a network, comprising:

 a storage device storing a predefined criterion, and having a monitoring module thereon; and

 a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the

network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation,

wherein the information includes at least one dynamic event and at least one condition, and wherein the predefined criterion is a rule-based criterion which enables the monitoring operation to monitor for the at least one event on the network and to check if a certain condition of the at least one condition is satisfied.

43. (Amended) The apparatus according to claim 42,

wherein the rule-based criterion includes:

at least one of a WHEN portion and an IF portion, and
a THEN portion,

wherein the THEN portion includes a probing action which has at least one probing operator, the probing action adapted for being performed on the network.

52. (Twice Amended) An apparatus for monitoring information on a network, comprising:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation,

53. (Twice Amended) An apparatus for monitoring information on a network, comprising:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation,

wherein the at least one result includes a copy of a portion of at least one monitored predicate.

58. (Amended) A method for monitoring information on a network, comprising:

receiving a predefined criterion;

monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and

receiving data from the network based on at least one result of the monitoring step.

62. (Twice Amended) A method for monitoring information on a network, comprising:

receiving a predefined criterion;

monitoring the information on the network as a function of the predefined criterion; and

receiving data from the network based on at least one result of the monitoring step, wherein the monitoring step being performed by executing at least one instruction on the network, wherein the information includes at least one event and at least one condition, and wherein the predefined criterion is a rule-based criterion, and wherein the monitoring step is performed by monitoring for the at least one event on the network and checking if a certain condition of the at least one condition is satisfied.

63. (Amended) The method according to claim 62,
wherein the rule-based criterion includes:

at least one of a WHEN portion and an IF portion, and
a THEN portion, and

wherein the THEN portion includes a probing action which has at least one probing operator, the probing action adapted for being performed on the network.

72. (Twice Amended) A method for monitoring information on a network, comprising:

receiving a predefined criterion;
monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and
receiving data from the network based on at least one result of the monitoring step, wherein the at least one result includes a copy of at least one monitored predicate.

73. (Twice Amended) A method for monitoring information on a network, comprising:

receiving a predefined criterion;
monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and
receiving data from the network based on at least one result of the monitoring step, wherein the at least one result includes a copy of a portion of at least one monitored predicate.

78. (Amended) An apparatus for monitoring information on a network, comprising:
a storage device storing a predefined criterion, and having a monitoring
module thereon; and

a processing device executing the monitoring module to transmit at least
one instruction to the network, the at least one instruction being performed on the
network and requesting a performance of a particular operation to continuously monitor
the information on the network as a function of the predetermined criterion, the
processing device is adapted to receive data from the network based on at least one
result of the particular operation.

80. (Amended) A method for monitoring information on a network, comprising:
receiving a predefined criterion;
continuously monitoring the information on the network as a function of the
predefined criterion, wherein the monitoring step being performed by executing at least
one instruction on the network; and
receiving data from the network based on at least one result of the
monitoring step.

82. (Amended) An apparatus for monitoring information on a network, comprising:
a storage device storing a predefined criterion, and having a monitoring
module thereon; and
a processing device executing the monitoring module to transmit at least
one instruction to the network, the at least one instruction being performed on the
network and requesting a performance of a particular operation to periodically monitor

the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the particular operation.

83. (Amended) A method for monitoring information on a network, comprising:

- receiving a predefined criterion;
- periodically monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network; and
- receiving data from the network based on at least one result of the monitoring step.



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Abbreviations

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